

Aquatic Ecosystem Protection and Fisheries Management in the Mid-Atlantic Highlands (USA) Using WHAT IF: A Collaboration of the Canaan Valley Institute, the Office of Research and Development, and Region III

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In the Highlands of the Mid-Atlantic, riparian zone restoration is a critical watershed management practice not only for the ecosystem services provided, but also for the potential socioeconomic growth from environmental investment and job creation. As described in its Highlands Action Program, the Canaan Valley Institute (CVI) partnered with the U.S. Environmental Protection Agency (U.S. EPA) to develop a watershed assessment and management tool that allows managers to evaluate riparian restoration actions to improve in-stream habitat quality and aquatic community sustainability. Continuing the successes of the ORD's MAIA, Environmental Monitoring and Assessment Program (EMAP), and the Regional Vulnerability Assessment (REVA) programs, Watershed Health Assessment Tool Investigating Fisheries (WHAT IF) integrates data and methods for achieving desired environmental outcomes in the Highlands. In collaboration with Region 3 and the Highlands states, the tool has been expanded to include stream insect (macrobenthic) Indices of Biotic Integrity (IBI), the common regulatory endpoint in Maryland, Pennsylvania, Virginia, and West Virginia. Stream insect IBIs can thus be evaluated side by side with fish health measures such as community biomass, abundance, and diversity. West Virginia provided REMAP (Regional-EMAP) data for validating WHAT IF, and Maryland, Pennsylvania, and Virginia are collaborating on further refinement of the tool for use in their states.

Although this work was reviewed by the U.S. EPA and approved for publication, it may not necessarily reflect official Agency policy.